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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,983	05/08/2000	GUSTAVO DECO	P000861	5072
21171	7590	08/19/2004		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER OROPEZA, FRANCES P	
			ART UNIT 3762	PAPER NUMBER

DATE MAILED: 08/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/530,983

Applicant(s)

DECO ET AL.

Examiner

Frances P. Oropeza

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/28/04 (Appeal).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Appeal

1. The Applicants argument in the Appeal filed 7/28/04 have been fully considered. The rejection of record is withdrawn and a new rejection established in the subsequent paragraphs.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to the arrangement/ methods of independent claims 1, 16, 17 and 18, “continuous information flow”, “comparison information flow”, and “test information flow” are not defined in the specification. The specification uses these terms in reference to several articles, but definitions of these terms are not found in the specification. In addition, the details of the components and methods associated with the arrangement and method for predicting an abnormality of a dynamic system and for implementing an action opposing the abnormality/ using a continuous information flow that describe a development of a predictability of several future system states are not found in the specification. The specification does not describe how

the apparatus and system train the neural network, determine comparison information flow, determine test information flow, use the comparison information flow and the test information flow to predict an abnormality, nor how an action/ procedure is implemented. The specification references articles by Deco et al. (paragraph 0001), Schottenkopf et al. (paragraph 0001), Herz et al (paragraph 004), Deco et al. (paragraph 0034) and Gluckmann et al. (paragraph 0039) that may provide the missing details, but these article are not incorporated by reference, hence they are not included in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 10, and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ravdin et al. (US 5862304).

Ravdin et al. disclose a method for predicting the future occurrence of non-existent medical conditions, including medical conditions such as psychiatric problems (col. 3 @ 19-27). Data is evaluated to predict the future occurrence of the medical condition that have not yet occurred using a neural network to analyze the data (Abstract). Once the neural network is trained, test data is used to predict the future occurrence of the disease or medical

condition (col. 2 @ 43-50). The prediction of the medical condition enables selection of appropriate therapy (col. 1 @ 15-28). The data processing utilizes a neural network to predict the future occurrence of non-existent medical conditions. The data processing by the neural network entails successive data iterations, read to be using a continuous information flow, to make successful predictions of patient relapse (col. 9 @ 49-52).

It is noted the limitation of information flow describing a development of a predictability of plural future system states is an intended use limitation that Ravdin et al. performs or is capable of performing. Ravdin et al. evaluates multiple parameters to determine the future disease states, these future disease states representing the different stages of the potential illness in the patient given the monitored parameters of the patient and the timeframe being referenced. Multiple/ plural future disease states are determined by Ravdin et al., the exact prediction of the future state being dependent on the values of the particular parameters and the time or point in the future that is examined (col. 4 @ 60 – col. 5 @ 22; col. 10 @ 61-67).

Claim Rejections - 35 USC § 103

6. Claims 4-9 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravdin et al. (US 5862304) in view of Abrams et al. (US 6117066). As discussed in paragraph 5 of this action, Ravdin et al. disclose the claimed invention except for the nature of the implemented action being excitation of the system with a chaotic signal, a noise signal or a regular signal supplied by an electric or magnetic field via an electrode.

Abrams et al. disclose a treatment for certain neurological and psychiatric disorders discussing the historical use of pulsed electrical current (col. 1 @ 38 – col. 3 @ 4) and an

Art Unit: 3762

alternate approach using electrodes (10-13) to provide pulsed magnetic fields with varying intensity (col. 4 @ 61 – col. 5 @ 19). The signals provided would be classified as a chaotic signal, a noise signal or a regular signal depending on the intensity and impact of the signal. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method for predicting the future occurrence of non-existent medical conditions as taught by Ravdin et al., with the nature of the implemented action being excitation of the system with a chaotic signal, a noise signal or a regular signal supplied by an electric or magnetic field via an electrode as taught by Abrams et al. to provide proven means to effectively treat neurological and psychiatric disorders (abstract; col. 1 @ 13-17).

Statutory Basis

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fran Oropeza whose telephone number is (703) 605-4355. The Examiner can normally be reached on Monday – Friday from 9 a.m. to 5 p.m..

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Angela D. Sykes can be reached on (703) 308-5181. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular and for After Final communications.

Art Unit: 3762

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Frances P. Oropeza
Patent Examiner
Art Unit 3762

FPO
8/17/04

Angela D. Sykes

**ANGELA D. SYKES
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